

## THE MOTHS OF INDIA.

SUPPLEMENTARY PAPER TO THE VOLUMES IN  
"THE FAUNA OF BRITISH INDIA."  
SERIES IV, PART III.

By

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(Continued from page 1083 of Volume XX.)

## Genus BRYOPHILA.

Type.

- Pacilia*, Schrank, Fauna Boica ii (2), p. 157 (1802), nec.  
Bl. Sch. Pisces 1801 .. .. . *muralis*.
- Bryophila*, Treit. Schmett. Eur. v (1), p. 57 (1825) .. *muralis*.
- Metachrostis*, Hübn. Verz., p. 204 (1827) .. .. *muralis*.
- Euthales*, Hübn. Verz., p. 205 (1827) .. .. *algæ*.
- Cryphia*, Hübn. Verz., p. 205 (1827) .. .. *receptricula*.
- Jaspidea*, Hübn. Tent., ined .. .. *algæ*.
- A. Forewing with the postmedial line minutely dentate  
or waved.
- a. Forewing with the claviform filled in with whitish.
- a<sup>1</sup>. Forewing with the medial shade interrupted in  
submedian interspace .. .. *nulgiria*.
- b<sup>1</sup>. Forewing with the medial shade not interrupted  
in submedian interspace.
- a<sup>2</sup>. Forewing with the antemedial line oblique .. *albiclava*.
- b<sup>2</sup>. Forewing with the antemedial line erect .. *poliophæa*.
- b. Forewing with the claviform not filled in with  
whitish.
- a<sup>1</sup>. Hindwing with the ground-colour yellow .. *deceptura*.
- b<sup>1</sup>. Hindwing with the ground-colour not yellow.
- a<sup>2</sup>. Forewing with the cilia chequered white and  
blackish.
- a<sup>3</sup>. Forewing with the postmedial line incurved  
at discal fold .. .. *lichenæa*.
- b<sup>3</sup>. Forewing with the postmedial line not  
incurved at discal fold .. .. *literata*.
- b<sup>2</sup>. Forewing with the cilia not chequered white  
and black.
- a<sup>3</sup>. Forewing ochreous suffused with fuscous.
- a<sup>4</sup>. Hindwing wholly suffused with brown .. *modesta*.
- b<sup>4</sup>. Hindwing white, the terminal area suf-  
fused with brown .. .. *ochrophæa*.

- b*<sup>3</sup>. Forewing more or less tinged with green or olive .. .. . *virescens*.
- B*. Forewing with the postmedial line not dentate or waved.
- a*. Forewing with the postmedial line oblique or slightly incurved below vein 4 .. .. . *racula*.
- b*. Forewing with the postmedial line strongly incurved below vein 4 .. .. . *ochrota*.

1976. BRYOPHILA NILGIRIA.

1976*a*. BRYOPHILA ALBICLAVA.

*Bryophila albiclava*, Hmps., Cat. Lep. Phal. B. M. vii, p. 622, pl. 122, f. 11 (1908).

♀. Head and thorax white; palpi and antennæ blackish; frons with black patch; tegulæ and patagia edged with black; legs irrorated with brown, the tarsi blackish ringed with white; abdomen pale-yellowish brown. Forewing white with a faint bluish tinge and sparsely irrorated with black-brown; subbasal line black, double, wavy, extending to inner margin, with black-brown suffusion before and beyond it on costa; antemedial line double oblique, wavy, the inner line interrupted; claviform white defined by black; orbicular and reniform large, white defined by black except above, the former with black-brown centre defined by black, round, conjoined to antemedial line, the latter with small black lunule on inner side of centre; medial area black-brown to the indistinct curved minutely wavy medial line; postmedial line double, slightly bent outward below costa, then dentate, excurved to vein 4, then strongly incurved, the costal area beyond it black-brown with some white points on costa; subterminal line black-brown, angled outwards above and below vein 6, incurved at discal fold to postmedial line, slightly excurved at middle, then angled inwards at submedian fold and outward at vein 1; a terminal series of small black lunules; cilia chequered black-brown and white. Hindwing white tinged with reddish brown; a faint discoidal spot, curved postmedial line, and diffused subterminal band; a terminal series of slight dark lunules; the underside white tinged with brown, the costal and terminal area irrorated with brown, a blackish discoidal spot and faint curved postmedial line.

*Habitat*.—KASHMIR, Gorrals Valley. *Exp.* 36 mill.

1976*b*. BRYOPHILA POLIOPHÆA.

*Bryophila poliophæa*, Hmps., Cat. Lep. Phal. B. M. vii, p. 622, pl. 122, f. 12 (1908).

Head and thorax whitish mixed with olive-brown and irrorated with black; palpi blackish, the extremity of 2nd joint white; antennæ black; tegulæ and patagia edged with black; tarsi blackish ringed with white; abdomen grey-white suffused with brown. Forewing whitish tinged with

pale olive-green and irrorated with fuscous; subbasal line black defined by white on outer side, oblique, waved, from costa to vein 1, with a small black spot beyond it in cell and some fuscous suffusion on costal and inner areas; antemedial line double, black filled in with white, the lines well separated and the inner line indistinct, slightly sinuous; claviform pale defined by black, with a short white streak defined by black above its extremity on median nervure; orbicular, a minute black annulus; reniform an oblique black bar; traces of an oblique minutely waved black line from lower angle of cell to inner margin; the medial area suffused with fuscous; postmedial line double filled in with whitish, slightly bent outwards below costa, then minutely waved, obliquely excurved to vein 4, then strongly incurved, some fuscous suffusion beyond it on costal area with white points on costa; subterminal line very indistinct, blackish, minutely waved, angled outwards at vein 7 and incurved at discal fold and below vein 3; a terminal series of minute black lunules; cilia chequered brownish-white and fuscous. Hindwing whitish uniformly suffused with brown; a faint discoidal spot and curved postmedial line; a slight dark terminal line; cilia white faintly tinged with brown, the underside brownish white with some dark irroration on terminal area, a black discoidal spot and somewhat diffused curved postmedial line.

*Habitat*.—KASHMIR, Chamba, Kardrug. *Exp.* 30 mill.

1978. BRYOPHILA DECEPTURA.

*Diphthera deceptura*, Wlk. XXXII, 614 (1865).

*Bryophila postochrea*, Hmps., Ill. Het. B. M. ix, p. 95, pl. 161, f. 8, (1893).

1975. BRYOPHILA LICHENEA.

1972. BRYOPHILA LITERATA.

1973. BRYOPHILA MODESTA.

1973a. BRYOPHILA OCHROPHÆA.

*Bryophila ochrophæa*. Hmps. Cat. Lep. Phal. B. M. vii, p. 631, pl. 122, f. 21 (1908).

Head and thorax brownish-white slightly irrorated with brown; palpi with blackish patch on 2nd joint; tarsi banded with blackish; abdomen ochreous white with faint dorsal brown bands, the ventral surface white. Forewing brownish-white irrorated with black-brown; subbasal line represented by blackish bars from costa and cell with dark marks beyond it on costa, in cell, and above inner margin; antemedial line blackish indistinctly double except towards costa, waved, almost erect, a band of thick dark irroration beyond it; orbicular and reniform with blackish centres and slight dark outlines, the former small, round, the latter somewhat constricted at middle; an indistinct waved medial line from cell to inner margin; postmedial line with small black spot at costa, slightly bent outwards below costa and incurved at discal fold, incurved and some-

what dentate below vein 4; subterminal line only defined by a band of dark irroration on its inner side, excurved below vein 7 and at middle and incurved at discal and submedian folds; a terminal series of black striæ. Hindwing white faintly tinged with brown; cilia pure white; the underside white faintly tinged with brown.

*Habitat*.—KASHMIR, Dras. *Exp.* 24-30 mill.

1974. *BRYOPHILA VIRESCENS*.

1974a. *BRYOPHILA RAVULA*.

*Noctua ravula*, Hübn. Eur. Schmett. Noct. f. 461 (1818); Staud. Cat. Lép. Pal., p. 166.

„ *lupula*, Hübn. Eur. Schmett. Noct. f. 573 (1818); Dup. Lép. Fr. vii., p. 367, pl. 122, f. 6 and Suppl. iv., pl. 69, f. 4; Frr. Neue. Beitr. pl. 170 ff. 4-5; Herr. Schöff. Eur. Schmett. Noct. f. 86.

*Bryophila ereptricula*, Treit. Schmett. Eur. (I), p. 66, (1825); Dup Lép. Fr. vii, p. 236, pl. 115, f. 4; Frr. Beitr. pl. 84, ff. I, 2 and pl. 129; id. Neue. Beitr. pl. 52, f. 2; Boisd. Icones., pl. 71, f. 5.

„ *trogodyta*, Frr. Neue. Beitr. I, p. 102, pl. 52, f. 1 (1833).

„ *vandalusia*, Dup. Lép. Fr. Suppl. iv., p. 405, pl. 82, f. 9 (1842); Herr. Schöff. Eur. Schmett. Noct. f. 569; Rmbr. Cat. Lép. S. Aud., pl. 6, ff. 1-2.

Head and thorax greyish mixed with red-brown and fuscous; palpi blackish, white at base; frons with lateral black bars; pectus and legs whitish mixed with black, the tarsi blackish tinged with white, abdomen whitish suffused with brown, the crests black. Forewing red-brown with some dark irroration, some whitish at base of inner margin; the antemedial area and costal area to postmedial line suffused with fuscous and irrorated with grey, some whitish suffusion beyond postmedial line; subbasal line double, curved, from costa to vein 1, above which there is a whitish patch beyond it; antemedial line double, somewhat inwardly oblique, and bent inwards to inner margin, the inner line slightly angled inwards in submedian fold; claviform represented by a slight brown striga at extremity; orbicular defined by black, elliptical; reniform with greyish centre slightly defined by black, and whitish annular slightly defined by black, constricted at middle; an oblique dark striga from middle of costa and faint incurved line from lower angle of cell to inner margin; postmedial line double filled in with whitish, the outer line indistinct, bent outwards below costa, excurved to vein 4, then incurved and slightly excurved at vein 1; the postmedial costal area blackish with oblique outer edge, and some grey points on costa; an indistinct minutely waved brown subterminal line, excurved below vein 7 and at middle; a black shade before termen from below apex to vein 3; a fine black terminal line;

cilia grey and fuscous with a dark line through them. Hindwing white, the veins and terminal area tinged with brown; cilia white, tinged with brown at apex and with slight brown marks at middle; the underside white; the costa and terminal area to vein 2 irrorated with brown, a small discoidal spot and sineous postmedial line.

*ab. 1. ereptricula.* Forewing darker, the basal area diffused with white, the terminal area with diffused white spots towards costa and tornus.

*ab. 2. vandalusia.* Forewing much greyer; hindwing white in male. Spain, Asia Minor, Mesopotamia.

*ab. 3.* Similar, but forewing with the antemedial area rufous. Syria.

*Habitat.*—EUROPE; ALGERIA; ASIA MINOR; SYRIA; MESOPOTAMIA; KASHMIR, Dana. *Exp.* 24-30 mill.

*Larva.*—Kirby, Butt. and Moths. Eur. p. 160; Hfm. Raup., p. 77.

Blue with a black dorsal line and yellowish red lateral stripe defined below by black. Food plants: Lichens on Walls. 5-6.

1974b. *BRYOPHILA OCHROTA.*

*Bryophila ochrota*, Hmps., Cat. Lep. Phal. B. M. vii., p. 641, pl. 122, f. 27 (1908).

Head and thorax white tinged with brown; 2nd joint of palpi with blackish patch at sides; tarsi banded with blackish; abdomen ochreous white with dorsal brownish bands. Forewing ochreous white mostly suffused with brown and irrorated with fuscous, the medial area rather darker; subbasal line indistinctly double filled in with whitish and with some rufous scales on it, from costa to submedian fold; antemedial line indistinctly double filled in with whitish and with some rufous on outer line, bent inwards to costa, then minutely waved; claviform with its extremity faintly defined by blackish; orbicular and reniform with brownish centres and slight whitish annuli faintly defined by blackish, the former round, the latter somewhat constricted at middle; traces of a waved medial line from cell to inner margin; postmedial line double filled in with whitish, some rufous on the inner line, bent outwards below costa, strongly excurved to vein 4, then strongly incurved, some white points beyond it on costa; traces of a pale minutely waved subterminal line below vein 3; a terminal series of minute dark lunules defined on inner side by slight pale lunules; cilia with a slight whitish line through them. Hindwing white, faintly tinged with brown; cilia pure white; the underside white faintly tinged with brown.

*Habitat.*—KASHMIR, Dras; BELOOCHISTAN, Quetta. *Exp.* 26 mill.

Genus IAMBIA.

*Type.*

*Iambia* wk, xxvii. 109 (1863) .. .. . *infernalis.*

Proboscis fully developed; palpi upturned, the 2nd joint reaching about

to middle of frons and moderately scaled, the 3rd moderate; frons smooth; eyes large, round; antennæ of male ciliated; thorax clothed chiefly with scales, the prothorax without crest, the metathorax with spreading crest; tibiæ moderately fringed with hair; abdomen with dorsal crests on basal segments. Forewing with the apex rounded, the termen very slightly crenulate and somewhat excised from vein 3 to tornus; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

- A. Forewing with two of the terminal points confluent and forming a lunule at discal fold.
- a. Forewing with small wedge-shaped white marks before subterminal line above and below vein 4. . . *nocturna*
- b. Forewing without small wedge-shaped white marks before subterminal line.
- a<sup>1</sup>. Forewing with pale streaks on veins 6 and 4 intersecting the dark postmedial patch . . . *harmonica*.
- b<sup>1</sup>. Forewing without pale streaks on veins 6 and 4 intersecting the dark postmedial patch . . . *thuaitesi*.
- B. Forewing without terminal lunule at discal fold.
- a. Forewing whitish suffused with grey-brown . . . *transversa*.
- b. Forewing with the ground colour bright rufous . . . *rufescens*.
- 1838a. IAMBIA NOCTURNA.
- 1839c. IAMBIA HARMONICA.
1866. IAMBIA THUAITESI.
1867. IAMBIA TRANSVERSA.
1870. IAMBIA RUFESCENS.

Genus IAMBIODES.

*Type.*

*Iambiodes*, Hmps. Cat. Lép. Phal. B. M. vii., p. 659 (1908). *anormalis*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons and rather broadly scaled, the 3rd moderate; frons with large prominence with raised corneous walls at extremity; eyes large, round; antennæ of female somewhat laminate; thorax clothed almost entirely with scales, the prothorax without crest, the mesothorax with small paired crests, the metathorax with decumbent crest; tibiæ moderately fringed with hair; abdomen with dorsal crest at base only. Forewing with the apex rounded, the termen evenly curved and slightly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins

3·4 from angle of cell; 5 obsolescent from middle of discocellulars: 6·7 from upper angle; 8 anastomosing with the cell near base only.

2025a. IAMBIODES ANORMALIS.

Genus PARIAMBIA.

*Type.*

*Pariambia*, Hmps., Cat. Lep. Phal. B. M. vii., p. 660, (1908).. *pulla*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching to about vertex of head and moderately scaled, the 3rd moderate; frons with rounded prominence with vertical corneous ridge down middle; eyes large round; antennæ of male minutely ciliated; thorax clothed almost entirely with scales and without crests: tibiæ moderately fringed with hair; abdomen with dorsal crest at base only. Forewing with the apex rounded, the termen evenly curved and not crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5, obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

A. Metathorax without white patch; forewing reddish

brown suffused with fuscous .. .. . *pulla*.

B. Metathorax with white patch; forewing grey suf-

fused with fuscous .. .. . *unduligera*.

2089. PARIAMBIA PULLA.

*Acontia pulla*, Swinh., P. Z. S., 1885, p. 456, pl. 27, f. 15.

*Pariambia aprepes*, Hmps., Cat. Lep. Phal. B. M. vii., p. 660 (1908).

2078. PARIAMBIA UNDULIGERA.

Genus AUCHA.

*Type.*

*Aucha*, Wlk., xiii., 1137 (1857) .. .. . *velans*.

A. Hindwing with orange patch below and beyond end of cell.

a. Forewing with the antemedial, postmedial, and terminal areas strongly suffused with grey .. *nectens*.

b. Forewing uniform dark brown slightly suffused with grey.. .. . *velans*.

B. Hindwing nearly uniform dark brown .. .. *minor*.

1664. AUCHA NECTENS.

1663. AUCHA VELANS.

1663a. AUCHA MINOR.

*Aucha minor*, Hmps., Cat. Lep. Phal. B. M. vii., p. 666, pl. 123 f. 11 (1908).

♀. Head and thorax dark brown tinged with grey; pectus and legs greyer, the tarsi slightly ringed with white; abdomen grey-brown with

a reddish tinge. Forewing dark chocolate-brown largely suffused with grey; traces of a double curved sinuous antemedial line with an oblique dark brown shade beyond it from costa to median nervure: orbicular and reniform absent; an indistinct medial line, oblique from cell to inner margin; postmedial line indistinct, brown, dentate, oblique from costa to vein 6, slightly angled inwards at discal fold, incurved below vein 4, a triangular red-brown patch beyond it on costal area with some grey points on the costa; an indistinct waved brown subterminal line; a terminal series of slight brown spots. Hindwing red-brown with the terminal area dark brown; cilia pale rufous with a red-brown line near base; the underside greyish suffused with rufous except on inner area to the indistinct curved postmedial line, a slight discoidal lunule.

*Habitat*.—BOMBAY, KARWAR, *Exp.* 26 mill.

Genus POLYPHÆNIS.

*Type*.

*Polyphænis*, Boisd., Ind. Meth., p. 128 (1840). . . . . *sericata*.

*Triphænosis*, Butl. A. M. N. H. (5) i., p. 163 (1878) . . . *lucilla*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons and moderately fringed with hair in front, the 3rd typically moderate; frons smooth; eyes large, round; antenna of male typically bipectinate with short branches; the apical part serrate; thorax clothed almost entirely with scales, the prothorax with spreading crest, the metathorax with divided crest; abdomen with dorsal series of crests. Forewing with the apex rounded, the termen evenly curved, crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cel. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

Sect. iv. (*Triphænosis*). Antennæ of male ciliated.

A. Palpi with the 3rd joint very long and porrect.

1749. POLYPHÆNIS PULCHERRIMA.

*Epilecta pulcherrima*, Moore, P. Z. S., 1867. p. 54, pl. 6, f. 3.

*Polyphænis largetani*, Obuth. Et. Ent. vi., p. 19. pl. viii, f. 4 (1881).

*Epilecta opulenta*, Butl. P. Z. S., 1883, p. 160.

B. Palpi with the 3rd joint short.

a. Hindwing with the inner edge of the terminal band strongly incurved at discal fold . . . . . *confecta*.

b. Hindwing with the inner edge of the terminal band not incurved at discal fold

a<sup>1</sup>. Hindwing with the inner area brown.

a<sup>2</sup>. Hindwing with dark discoidal striga, the post-medial line absent . . . . . *diminuta*.



61. Hindwing without discoidal striga, a slight  
postmedial line from vein 6 to inner margin. *inepta*.
6. Hindwing with the inner area not brown .. *indica*.
1748. POLYPHENIS CONFECTA.
1746. POLYPHENIS DIMINUTA.
1745. POLYPHENIS INEPTA.
1747. POLYPHENIS INDICA.

## Genus ARÆA.

*Type.*

*Aræa*, Hmps., Cat. Lep. Phal. B. M. vii., p. 688 (1908) .. *attenuata*.

Proboscis fully developed; palpi upturned, slender, the 2nd joint reaching about to vertex of head and moderately fringed with hair in front, the 3rd short; frons smooth; eyes large, round; antennæ of male minutely ciliated; build slender; head and thorax roughly clothed with hair and scales mixed, the pro- and metathorax with loose spreading crests; tibiæ fringed with rather long hair; abdomen with some rough hair at base, but without crests, the female with long exerted ovipositor. Forewing narrow and elongate, the apex rounded, the termen obliquely curved and hardly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3+4 from angle of cell; 5 obsolescent from middle of discocellulars; 6+7 stalked; 8 anastomosing with the cell near base only.

1971. b. ARÆA ATTENUATA, Hmps., Cat. Lep. Phal. B. M. vii., p. 688 (1908).

Head and thorax grey mixed with dark brown; palpi black except in front; frons with lateral black bars; tarsi black with pale rings; abdomen brownish grey. Forewing brown tinged with grey and irrorated with black; subbasal line black, somewhat dentate, from costa to submedian fold; a black streak below the cell confluent with the lower edge of claviform, which is narrow and acuminate; antemedial line strong, black, slightly angled outwards below costa, then minutely waved; orbicular and reniform grey irrorated with brown and strongly defined by black, the former round or oblique elliptical, open above; the discal and postmedial areas more strongly suffused with brown; postmedial line strong, black, defined on outer side by whitish, but outwards below costa, then dentate, strongly excurved to vein 4, then very oblique, some white points beyond it on costa; subterminal line diffused, white, angled outwards at vein 7 and inwards at discal and submedian folds, at former to postmedial line, with short black streak beyond it above and below vein 5; a terminal series of small black lunules; cilia white with brownish line through them. Hindwing whitish suffused with brown; a slight brown terminal line; cilia

white with a brownish line through them except towards tornus; the underside white irrorated with brown, a blackish discoidal spot and indistinct curved postmedial line.

*Habitat*.—KASHMIR, Scinde Valley, Goorais Valley. *Exp.* 34 mill.

Genus CANNA.

*Type.*

*Canna*, Wlk., xxxiii. 790. (1865) . . . . . *pulchripicta*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons and moderately fringed with hair, the 3rd short; frons smooth; eyes large, round; antennæ of male laminate; thorax clothed with elongate scales, the prothorax without crest; the mesothorax with paired tufts of scales, the metathorax with spreading crest; the patagia with upturned tufts of scales at extremity; tibiæ fringed with long hair; abdomen with dorsal series of crests, the crest on 4th segment large. Forewing short and broad, the apex rounded, the termen excurved at middle and excised below apex and towards tornus which is somewhat lobed: veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolete from just below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

A. Abdomen with the crest on 4th segment formed of long black scales.

a. Forewing with the medial band green tinged with fuscous . . . . . *prasinaria*.

b. Forewing with the medial band red-brown . . . . . *malachitis*.

B. Abdomen with the crest on 4th segment formed of ochreous hair . . . . . *pulchripicta*.

1965. CANNA PRASINARIA.

1964. CANNA MALACHITIS.

1963. CANNA PULCHRIPICTA.

Genus DASEOCHETA.

*Type.*

*Daseochaeta*, Warren, Seitz, *Macrolepidoptera*, pt. 9, p. 11

(1907) . . . . . *viridis*.

*Diphtherocome*, Warren, Seitz, *Macrolepidoptera*, pt. 9, p. 11

(1907) . . . . . *pallida*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to vertex of head and fringed with hair in front, the 3rd rather long, naked; frons smooth; eyes large, round; antennæ of male typically bipectinate with long branches to apex; thorax clothed with long rough hair and hair-like scales, the pro- and metathorax with spreading crests, the patagia

tufted at extremity; tibiæ fringed with hair; abdomen with dorsal series of crests, large at middle. Forewing with the apex rounded, the termen evenly curved and not crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolete from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

*Sect. II. (Diphtherocone).* Antennæ of male bipectinate with moderate branches, the apical fourth ciliated.

1967. *DASEOCHETA PALLIDA.*

*Sect. III.* Antennæ of male bipectinate with short branches, the apical third ciliated.

A. Hindwing with broad brownish subterminal band .. *vigens.*

B. Hindwing without subterminal band.

a. Forewing with large quadrate black mark in out-  
median interspace before postmedial line .. *brevipennis.*

b. Forewing with slight black spot in submedian  
interspace before postmedial line .. .. *fasciata.*

1966. *DASEOCHETA VIGENS.*

1967a. *DASEOCHETA BREVIPENNIS.*

*Daseochata brevipennis*, Hmps., Cat. Lep. Phal. B. M. viii., p. 27, pl. 123,  
f. 21 (1909).

Head and thorax pale blue-green; palpi black; antennæ brown; shoulders with black patches; tibiæ with black spots, the tarsi banded black and white; abdomen ochreous white dorsally suffused with ochreous brown, ventrally black-brown. Forewing pale blue-green, the basal and post-medial areas suffused with olive-green; subbasal line represented by a black striga from costa; a short black streak in base of sub-medial fold, and a curved black streak above inner margin from near base to the antemedial line, which is black defined on outer side by white, incurved in cell, angled outwards in submedian fold, then incurved and ending at the streak above inner margin; claviform minute, defined by some black scales above and at extremity; orbicular and reniform defined by black and white at sides and with quadrate black patch between them, the former small, round, sometimes defined by black below; a black bar from middle of costa and oblique striga from inner margin; the medial area with white fascia in submedian fold ending in a quadrate black spot before postmedial line with spurs above and below from its inner edge; postmedial line black defined by white on inner side, bent outwards below costa, incurved at discal fold, excurved and slightly angled at veins 4·3, then strongly incurved to submedian fold, and excurved to inner margin, some black points beyond it on costa, followed by a triangular spot; a series of black points formed by diffused scales towards

termen; cilia with series of black lunules at tips. Hindwing white faintly tinged with green; a diffused blackish discoidal spot, with diffused band, from it to inner margin, and traces of a postmedial line at middle and towards tornus; the underside with slight black streak in middle of cell diffused curved medial band blacker towards costa and more or less confluent with the discoidal spot, much interrupted postmedial line, and series of black points before termen.

*Habitat.*—SIKHIM; TIBET. Yatong. *Exp.* 32 mill.

1967*b*. DASEOCHÆTA FASCIATA.

*Diphthera fasciata*, Moore, P. Z. S., 1888, p. 408, Butl. Ill. Het. B. M. vii., p. 30, pl. 122, f. 1.

Palpi black, white at tips; head brownish white, the vertex green, the sides of frons black, the antennæ brown, white at base; tegulæ and patagia blue-green, the dorsum of thorax brownish white; pectus green at sides, black-brown ventrally; tibiæ green with black marks, the tarsi banded black-brown and white; abdomen brownish white with a large black-brown ventral patch. Forewing pale blue-green with some darker suffusion before the antemedial line and beyond the postmedial line; subbasal line represented by a black joint on costa followed by a bar; a very short black streak below base of cell and an oblique white fascia above a curved black fascia on inner area extending to the antemedial line, which is represented by an oblique striga from costa and a line slightly defined on outer side by white from subcostal nervure to the black fascia above inner margin, bent outwards at median nervure, angled outwards at submedian fold, then incurved; the medial area with white streak in submedian fold with black point on it at extremity of claviform; orbicular and reniform defined by black and white at sides with quadrate black patch between them, open above and below, the former round, a black bar from costa to the black patch, a point on inner margin and a small black lunule in submedian fold on inner edge of the postmedial line, which is represented by two black points on costa and black line defined on inner side by white from below costa, much nearer termen, angled inwards at discal fold, outwards at veins 4·3, then bent inwards and outwardly oblique to inner margin, a black spot with white point on it beyond it on costa; cilia with slight black-brown lunules at tips. Hindwing pale blue-green with some ochreous hair on inner area; a diffused blackish discoidal spot; the underside with strong black bar from costa to the discoidal spot and two spots on inner area, postmedial points below costa and vein 7 and small spots in discal and submedian folds and above inner margin.

*Habitat.*—W. CHINA; PUNJAB, Laka; SIKHIM. *Exp.* 44 mill.

Sect. IV. Antennæ of male serrate and fasciculate.

1968*a*. DASEOCHÆTA CHRYSOCHLORA.

Sect. V. Antennæ of male ciliated.

- A. Forewing with black postmedial band interrupted  
by white streaks on veins 6, 4, 3, 2. . . . . *muscosa*.
- B. Forewing with the postmedial band not interrupted  
by white streaks . . . . . *discibrunnea*.

## 1977. DASCOCHÆTA MUSCOSA.

*Bryophila muscosa*, Hmps. Ill. Het. B. M. viii., p. 72, pl. 144, f. 15 (1891).

*Diphthera imray*, Hmps. J. Bomb. Nat. Hist. Soc. xvii., p. 472 (1906).

## 1968. DASECHÆTA DISCIBRUNNEA.

## Genus THALATHA.

*Type.*

*Thalatha*, Wlk., Journ. Linn. Soc. Zool. vi., p. 187 (1862) *sinens*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons and moderately fringed with hair in front, the 3rd moderate; frons with very small corneous prominence at middle with raised edges; eyes large, round; antennæ of male typically laminate; thorax clothed chiefly with scales and without crests; tibiæ moderately fringed with hair; abdomen with dorsal crests at base only. Forewing with the apex typically rounded, the termen evenly curved and very slightly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 shortly stalked or from angle; 8 anastomosing with the cell near base only.

A. Forewing with terminal series of small black spots.. *conjecturalis*.

B. Forewing with terminal series of slight dark striæ.. *sinens*.

## 1817. THALATHA CONJECTURALIS.

*Thalatha sinens*, Wlk., Journ. Linn. Soc. Zool. vi., p. 187 (1862)  
var. nec. 1856.

*Bryophila conjecturalis*, Swinh. Trans. Ent. Soc. 1890, p. 222, pl.  
vii., f. 10.

## 1816. THALATHA SINENS.

## Genus GOENYCTA.

*Type.*

*Goenyeta*, Hmps., Cat. Lep. Phal. B. M. viii., p. 49 (1909). *niveiguttata*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching to middle of frons and moderately fringed with hair in front, the 3rd short; frons with rounded prominence with corneous plate below it; eyes large, round; antennæ of female ciliated; thorax smoothly clothed with scales only and without crests; tibiæ moderately fringed with hair; abdomen with dorsal series of crests, the crest on segments 3·4·5 large. Forewing rather narrow, the margins subparallel, the apex rounded, the termen slightly excurved at middle and not crenulate; veins 3 and 5 from near

angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from just below middle of discocellulars, 6·7 from upper angle; 8 anastomosing with the cell near base only.

1993a. GOENYCTA NIVEIGUTTATA.

Genus TYCRAONA.

Type.

*Tycraona*, Moore, Lep. Atk. p. 95 (1882) .. .. . *obliqua*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to vertex of head and moderately scaled, the 3rd prorect, short; frons with small rounded prominence at middle; eyes large, round; antennæ laminate; thorax clothed almost entirely with scales and without crests; tibiæ moderately fringed with hair; abdomen with dorsal crest at base only. Forewing triangular, the apex rounded, the termen evenly curved and not crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with the termen strongly curved; veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

1823. TYCRAONA OBLIQUA.

Genus CRANIOPHORA.

Type.

*Craniophora*, Snell. Vlind. van. Ned. ii, p. 262 (1872) .. *ligustri*.

*Bisulcia*, Chapman, Ent. Rec. i. p. 28 (1890) .. .. *ligustri*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons and moderately fringed with hair in front, the 3rd short; frons smooth; eyes large, round; antennæ simple and laminate in both sexes; thorax clothed with scales mixed with hair; the prothorax without crest, the metathorax with divided crest; tibiæ moderately fringed with hair; abdomen with dorsal series of crests and rough hair at base. Forewing with the apex rounded, the termen evenly curved and slightly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from just below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

A. Forewing with prominent black fascia in submedian fold extending to termen.

a. Forewing with the claviform large, defined by black. *nigrivitta*.

b. Forewing with the claviform absent .. .. *fasciata*.

B. Forewing without prominent black fascia in submedian fold .. .. *nubilata*.

1820. CRANIOPHORA NIGRIVITTA.

1822. CRANIOPHORA FASCIATA.

*Acronycta fasciata*, Moore, Lep. Ceyl. iii., p. 5, pl. 144, f. 4 (1884).*Hyboma divisa*, Moore, P. Z. S. 1888. p. 409; Butl. Ill. Het.

B. M. vii., p. 45, pl. 125, f. 7.

*Acronycta nigrostriata*, Pag. Jahrb. Nass. Ver. xli., p. 128 (1889).

1711. CRANIOPHORA NUBILATA.

## Genus ACRONYCTA.

	<i>Type.</i>
<i>Acronicta</i> , Ochs. Schmett. Eur. iv., p. 62 (1815). non descr.	<i>leporina</i> .
<i>Acronycta</i> , Treit. Schmett. Eur. v. (1). p. 3. (1825) .. .. .	<i>leporina</i> .
<i>Hyboma</i> , Hübn. Verz., p. 200 (1827) .. .. .	<i>strigosa</i> .
<i>Triæna</i> , Hübn. Verz. p. 200 (1827) .. .. .	<i>psi</i> .
<i>Jocheæra</i> , Hübn. Verz., p. 201 (1827) .. .. .	<i>albi</i> .
<i>Pharetra</i> , Hübn. Verz. p. 202 (1827) .. .. .	<i>auricoma</i> .
<i>Arctomyseis</i> , Hübn. Verz. p. 202 (1827) .. .. .	<i>aceris</i> .
<i>Microcælia</i> , Guen. Noct. i., p. 33 (1852) .. .. .	<i>fragilis</i> .
<i>Megaacronycta</i> , Grote, Bull. Buff. Soc., Nat. Sci. i, p. 79 (1873)	<i>hastulifera</i> .
<i>Lepitoreuma</i> , Grote, Bull. Buff. Soc. Nat. Sci. i, p. 80 (1873)	<i>ovata</i> .
<i>Plataplecta</i> , Butl. A. M. N. H. (5) i., p. 195 (1878) .. .. .	<i>pruinosa</i> .
<i>Mastiphænes</i> , Grote, New Check List, p. 23 (1882) non. descr.	<i>edolata</i> .
<i>Viminia</i> , Chapman, Ent. Rec. i., p. 26 (1890) .. .. .	<i>rumicis</i> .
<i>Cuspidia</i> , Chapman, Ent. Rec. i, p. 27 (1890) .. .. .	<i>psi</i> .
<i>Pseudopunda</i> , Butl. Trans. Ent. Soc. (1890) p. 672 .. .. .	<i>bicolor</i> .
<i>Tricholonche</i> , Grote, Mitth. Hildersheim, iii, p. 16 (1896) ..	<i>afflicta</i> .
<i>Philorgyia</i> , Grote, Mitth. Hildersheim Mus. iii, p. 17 (1896)...	<i>luteicoma</i> .
<i>Apatela</i> , Hübn. Tent. ined .. .. .	<i>aceris</i> .

Sect. I. (*Hyboma*).—Thorax clothed chiefly with scales.

A. Forewing with distinct black streak from post-medial line to termen in submedian fold .. .. .

*albiorbis*.

B. Forewing without distinct black streak from post-medial line to termen in submedian fold.

a. Forewing without prominent white spot on post-medial line in submedian fold .. .. .

*pruinosa*.

b. Forewing with prominent white spot on postmedial line in submedian fold .. .. .

*rumicis*.

1818 b. ACRONYCTA ALBIORBIS.

*Plataplecta pruinosa*, Moore, Lep. Ceyl. iii, p. 5, pl. 144, f. 3 (nec. Guen).*Acronycta albiorbis*, Hmps., Cat. Lep. Phal. B. M. viii, p. 74 (1909).

Head and thorax white mixed with reddish brown; palpi with blackish mark on 2nd joint above; tegulæ and patagia edged with blackish; abdomen whitish suffused with pale yellow-brown. Forewing white almost entirely suffused with pale rufous; subbasal line represented by a black

striga from costa; a rather diffused sinuous black streak in submedian fold from base to the antemedial line which is double, the lines widely separated towards costa, oblique, waved, with black point on the outer line at submedian fold with white streak from it to the medial line; orbicular rather quadrate, extending to the antemedial line and defined on outer side by an oblique black striga; reniform large, rather quadrate, incompletely defined by black except above and with slight dark lunule on inner side of centre; a slight dark patch at middle of costa and brownish line from cell to inner margin angled outwards at vein 1; postmedial line double filled in with whitish lunules, bent outwards below costa, then minutely dentate, excurved to vein 4, then incurved, crossed by a black streak in submedian fold from medial to subterminal lines, some brown suffusion beyond it in discal and submedian folds; subterminal line found by ill-defined white lunules; some slight black striæ on termen defined by whitish lunules. Hindwing whitish suffused with pale red-brown; an indistinct postmedial line defined on outer side by whitish; the underside white tinged with red-brown, the costal and terminal areas slightly irrorated with brown, a brownish patch on middle of costa, slight discoidal spot and diffused postmedial line, oblique and waved to vein 5, then incurved.

*ab. 1.* Greyer and irrorated with dark-brown; forewing with the white lunules on postmedial line smaller and less distinct. Travancore.

*Habitat.*—TRAVANCORE, Pirmád; CEYLON, Pundaluoya. *Exp.* ♂ 38; ♀ 42 mill.

1818. *ACRONYCTA PRUINOSA.*

*Acronycta pruinosa*, Guen. Noct. 1, p. 53 (1852); Hmps., Cat.

Lep. Phal. B. M. viii, p. 91, pl. 125, f. 10.

*Polia soluta*, Wlk., xxxiii. 723 (1865).

1696. *ACRONYCTA RUMICIS.*

*Noctua rumicis*, Linn. Syst. Nat. ed. x., p. 516 (1758); Esp.

Schmett. iv, pl. 17, ff. 7-9; Hübn. Eur. Schmett. Noct., f. 9

Frr. Neue Beit., pl. 543; Steph. Ill. Brit. Ent. Haust., iii

p. 42; Dup. Lep. Fr. vi, p. 241, pl. 88, f. 2; Staud. Cat. Lep.

Pal., p. 133.

*Acronycta salicis*, Curt. Brit. Ent., v. pl. 136 (1829).

„ *diffusa*, Wlk. xi, 708 (1857).

„ *indica*, Moore, P. Z. S. 1867, p. 1 47.

„ *turanica*, Staud., Stett Ent. Zeit., 1888, p. 65; id. Rom.

Mém. v., pl. 8, f. 5.

„ *alnoides*, Grest, Allg. Zeit. Ent., viii, p. 310 (1903).

*Sect. II. (Tricena).*—Thorax clothed with hair like scales mixed with a few scales.

*A.* Forewing with the orbicular and reniform conjoined by a black streak.



- a. Forewing with black streak in discal fold beyond postmedial line .. .. . *maxima*.
- b. Forewing without black streak in discal fold beyond postmedial line.
- a<sup>1</sup>. Forewing without black shade in submedian interspace from base to termen .. .. . *iria*.
- b<sup>1</sup>. Forewing with black shade in submedian interspace from base to termen .. .. . *rubiginosa*.
- B. Forewing without black streak between orbicular and reniform.
- a. Forewing with distinct black streak below base of cell .. .. . *gastridia*.
- b. Forewing without black streak below base of cell.. *bicolor*.

## 1813. ACRONYCTA MAXIMA.

*Acronycta maxima*, Moore, P. Z. S. 1881, p. 333; Hmps., Cat. Lep. Phal. B. M., viii., p. 112, pl. 125, f. 21.

## 1813a. ACRONYCTA IRIA.

*Acronycta iria*, Swinh., A. M. N. H. (7) iii, p. 113 (1899); Hmps., Cat. Lep. Phal. B. M. viii, p. 113, pl. 125, f. 22.

♂. Head and thorax grey suffused with pale red-brown; palpi white, the 2nd joint with black band; antennæ with the basal joint black behind at tip; shoulders with black streak; tibiæ streaked with black; abdomen whitish dorsally tinged with brown. Forewing whitish suffused and irrorated with pale red-brown; subbasal line represented by double oblique dark striæ from costa; a sinuous black streak in submedian fold from base to antemedial line where it forks, giving off a slight spur below at middle; antemedial line indistinct, double, the lines very widely separated on costal half; oblique, waved, angled inwards on vein 1 and excurved above inner margin, the outer line angled outwards below costa; orbicular and reniform defined by fuscous, the former whitish with slight rufous centre, rather oblique elliptical, with a black streak from it extending into the reniform which has a rufous centre; a diffused oblique fuscous line from costa to reniform and traces of an oblique sinuous line from lower angle of cell to inner margin at antemedial line; postmedial line double, black filled in with white, the inner line incomplete, bent outwards below costa, then dentate, strongly incurved below vein 4, crossed by a black streak in submedian fold from well before it to termen towards which it expands, some whitish points beyond it on costa; the veins of terminal area with slight dark streak; faint traces of a minutely waved whitish subterminal line with slight dark streaks in the interspaces from it to the series of small black spots on termen and base of cilia, which are white with a slight black line through them. Hindwing white, the veins tinged with brown. The terminal area slightly suffused with brown from apex to submedian fold

and with a terminal series of slight dark lunules; the underside with the costal area slightly irrorated with brown, a black discoidal spot, faint traces of postmedial line with blackish spot in submedian fold and terminal series of slight dark lunules.

♀. Hindwing with indistinct sinuous postmedial line and the terminal area more suffused with fuscous.

*Habitat*.—PUNJAB, Kulu, Sultanpur. *Exp.* 50-54 mill.

1819. ACRONYCTA RUBIGINOSA.

*Acronycta rubiginosa*, Wlk., Journ. Linn. Soc. Zool. vi., p. 178, (1862).

*Tricena denticulata*, Moore, P. Z. S., 1888, p. 408; Butl., Ill. Het. B. M. vii., p. 45, pl. 125, f. 8.

1815. ACRONYCTA GASTRIDIA.

*Acronycta aceris*, Hmps., Moths. Ind. ii, p. 241 (nec. Linn.)

„ *gastridia*, Swinh., A. M. N. H. (6) xv, p. 5 (1895).

1821. ACRONYCTA BICOLOR.

Genus SIMYRA.

*Type.*

*Simyra*, Ochs. Schmett. Eur. iv., p. 18 (1816), non. descr.;

Treit. Schmett. Eur. (5) ii, p. 280 (1825) .. *albovenosa*.

*Arsilonche*, Led. Noct. Eur., p. 70 (1857).. .. *albovenosa*.

Proboscis aborted, minute; palpi porrect, extending to beyond the frons and clothed with long hair; frons smooth; eyes rather small, round; antennæ of male typically laminate; thorax clothed with hair only and without crests; tibiæ fringed with long hair; abdomen dorsally clothed with rough hair at base and with lateral fringes of hair, but without crests. Forewing with the apex somewhat produced and acute, the termen obliquely curved and not crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell or shortly stalked; 5 obsolescent from just below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

A. Forewing nearly uniform rufous, the costal edge white. *albicosta*.

B. Forewing with the costal edge not white.

a. Forewing pale rufous thickly irrorated with rufous .. *confusa*.

b. Forewing ochreous white sparsely irrorated with rufous .. .. *conspersa*.

1944a. SIMYRA ALBICOSTA.

*Simyra albicosta*, Hmps., Cat. Lep. Phal. B. M. viii, p. 178, pl. 127, f. 15 (1909).

♀. Head and thorax white, the head, tegulæ, prothorax, front of pectus and legs suffused with rufous; abdomen white tinged with red-brown. Forewing rufous, the costal edge white, the median nervure and veins of

terminal half slightly streaked with white; a white spot at base of costa; cilia tipped with white. Hindwing white faintly tinged with red-brown; cilia white.

*Habitat*—MADRAS, Nilgiris. *Exp.* 40 mill.

1944. SIMYRA CONFUSA.

1949. SIMYRA CONSPERSA.

Genus CETOLA.

*Type.*

- Cetola*, Wlk. v., 1015 (1855) .. .. . *dentata*.  
*A.* Forewing with crimson suffusion on costal area to  
 beyond middle .. .. . *rubricosta*.  
*B.* Forewing with fuscous suffusion on costal area to  
 beyond middle .. .. . *dentata*.

2348*a*. CETOLA RUBRICOSTA.

2348. CETOLA DENTATA.

Genus MATOPO.

*Type.*

*Matopo*, Dist. A. M. N. H. (7) i, p, 227 (1898) .. .. . *typica*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons and moderately scaled, the 3rd short, porrect; frons with large rounded prominence with corneous plate below it; eyes large, round; antennæ of male typically bipectinate with rather long branches, the apex simple; thorax clothed chiefly with scales, the pro- and metathorax with spreading crests; tibiæ moderately fringed with hair; abdomen with dorsal crest at base only. Forewing with the apex rounded, the termen evenly curved and not crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from just below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

*Sect. II.*—Antennæ of male minutely serrate, of female ciliated.

2672. MATOPO CELECTA.

*Xylophasia selecta*, Wlk, xxxii, 646 (1865).

*Calophasia lobifera*, Moore, P. Z. S. 1881, p. 358.

Genus DELTA.

*Type.*

*Delta*, Saalm, Lep. Madag., p. 263 (1891) .. .. . *stolifera*.

*Trichorhiza*, Hmps., Cat. Lep. Phal. B. M. v., p. 13 (1905). *petersenii*.

Proboscis fully developed; palpi obliquely porrect, reaching to just beyond frons, the 2nd joint rather broadly fringed with hair below, the 3rd short; frons smooth, with ridges of hair at middle and above; eyes large, round; antennæ of male ciliated; thorax clothed with hair and scales mixed, the

tegulae produced to a dorsal ridge above the thorax with divided ridge-like crest; tibiae fringed with long hair on outer side; abdomen with dorsal crests on basal segments. Forewing with the apex somewhat produced and acute, the termen evenly curved, crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from just below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

A. Forewing with the reniform expanding below and extending to well below angle of cell .. .. *intermedia*.

B. Forewing with the reniform small and not extending to below the cell .. .. *indica*.

1941. DELTA INTERMEDIA.

1803. DELTA INDICA.

#### Genus CHIRIPHA.

*Type.*

*Chiripha*, Wlk, ix, 200 (1859) .. .. *involuta*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons and moderately fringed with hair, the 3rd short; frons smooth, with ridge of hair above; eyes large, round; antennae of male bipectinate with short branches, the apex serrate; head and thorax clothed with hair and hairlike scales, the pro- and metathorax with spreading crest; tibiae moderately fringed with hair; abdomen with dorsal crest at base only. Forewing with the apex somewhat produced and acute, the termen obliquely curved, crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from just below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

1784. CHIRIPHA INVOLUTA.

#### Genus CALOGRAMMA.

*Type.*

*Calogramma*, Guen. Noct. i., p. 165 (1852) .. .. *festiva*.

1832. CALOGRAMMA FESTIVA.

#### Genus PRODENIA.

*Type.*

*Prodenia*, Guen. Noct. i., p. 159 (1815) .. .. *androgea*.

1829. PRODENIA LITURA.

*Noctua litura*, Fabr. Syst. Ent., p. 601 (1775).

.. *histrionica*, Fabr. Syst. Ent., p. 612 (1775).

.. *elata*, Fabr. Spec. Ins., ii, p. 220 (1781).

- Hadena littoralis*, Boisd. Faun. Ent., Mad, p. 91, pl. 13, f., 8 (1833).  
 Moore, Lep. Ceyl. iii., p. 19, pl. 146, ff. i, a. b. ;  
 Staud Cat. Lep. pal., p. 184.  
 ,, *retina*, Frr. Neue, Beitr. v., p. 161, pl. 478, ff. 2·3 (1846) ;  
 Herr. Schaff. Eur. Schmett. Noct., ff. 144-5.  
*Prodenia tasmanica*, Guen. Noct. i., p. 163 (1852).  
 ,, *ciliger*, Guen. Noct. i., p. 164 (1852).  
 ,, *testaceoides*, Guen. Noct. i, p. 165 (1852).  
 ,, *subterminalis*, Wlk., ix, 196 (1856).  
 ,, *glaucistriga*, Wlk., ix, 197 (1856).  
 ,, *declinata*, Wlk., xi, 723 (1857).  
*Mamestra albisparsa*, Wlk., Journ, Linn. Soc. Zool. vi, p. 186 (1862).  
*Prodenia evanesceous*, Butl., Mem. Nat. Ac. Sci. Wash. Rep. Eclipse.  
 Exp., p. 94 (1884).

## Genus SPODOPOTERA.

Type.

- Spodoptera*, Guen. Noct. i, p. 153 (1852) .. .. . *mauritia*.  
*Eulaphygma*, Butl. Trans. Ent. Soc. 1890, p. 668 .. .. . *abyssinia*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons and moderately scaled, the 3rd short; frons smooth; eyes large, round; antennæ of male typically ciliated; thorax clothed chiefly with scales, the prothorax without distinct crest, the metathorax with spreading crest; fore tibiæ broadly fringed with hair on outer side, the mid and hind tibiæ moderately fringed; abdomen with dorsal crest at base only. Forewing with the apex rounded, the termen evenly curved and slightly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from just below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

*Sect. I.*—Antennæ of male bipectinate with short branches, the apex serrate.

## 1874. SPODOPOTERA PECTEN.

*Spodoptera pecten*, Guen. Noct. i., p. 155 (1852); Staud. Cat. Lep. pal. p. 195 (part).

,, *erica*, Butl. P. Z. S., 1880, p. 675.

*Spælotis uniformis*, Swinh., Trans. Ent. Soc. 1890, p. 226.

*Caradrina pectinata*, Hmps., Moths Ind. ii, p. 264 (1894).

*Sect. II.* (*Eulaphygma*).—Antennæ of male minutely serrate and fasciculate.

## 1831a. SPODOPOTERA ABYSSINIA.

*Spodoptera abyssinia*, Guen. Noct. 1, p. 154 (1852).

,, *cilium*, Guen. Noct. 1, p. 156 (1852).

- Caradrina latebrosa*, Led. Verz. Zool. Bot. Ges. Wien. 1855, p. 205, pl. 2. f., 11; Staud. Cat. Lep. pal. p. 195.
- „ *orbicularis*, Wlk., x., 294 (1856); Hmspn. Nat. Hist. Sokotra, p. 323, pl. xx, f. 26.
- „ *præterita*, Wlk., x., 294 (1856).
- „ *insignata*, Wlk., x., 295 (1856).
- Laphygma procedens*, Wlk., xi., 721 (1857).
- Agrotis infixa*, Wlk. Journ. Linn. Soc. Zool. vi., p. 186 (1862).
- Laphygma obliterans*, Wlk., Trans. Ent. Soc. (3) 1, p. 87 (1862).
- Spodoptera insulsa*, Wlk., xxxii., 648 (1865).
- Laphygma imperviata*, Wlk., xxxii., 651 (1865).
- „ *retrahens*, Wlk., Entom. v., p. 126 (1870).

♂. Head and thorax ochreous suffused with red-brown; palpi with black bands on 2nd and 3rd joints near extremities; frons with lateral black bars; tegulae with black medial line; tarsi black ringed with white; abdomen whitish dorsally suffused with brown. Forewing greyish suffused with brown; subbasal line represented by double black striæ from costa and cell; antemedial line double filled in with whitish, the inner line indistinct, oblique, waved; orbicular whitish defined by black and with slight brown centre, oblique elliptical, open below and connected by a streak above median nervure with the reniform which is defined by black on inner side, its centre defined by diffused black; an oblique dark striga from costa to reniform and waved line from lower angle of cell to inner margin, angled inwards in submedian fold; postmedial line double filled in with whitish, the outer line indistinct, bent outward below costa, then minutely dentate, incurved below vein 4, some pale points with fuscous between them beyond it on costa; subterminal line whitish defined on inner side by fuscous suffusion except between veins 7 and 5, and with slight dark streaks in the interspaces before it at middle, angled outward at vein 7, recurved and slightly waved at middle and angled inwards in submedian fold; the terminal area tinged with fuscous; a terminal series of small rather triangular black spots; cilia whitish with a fuscous line near base and some fuscous at tips. Hindwing from semihyaline white; the underside with the costa slightly irrorated with brown, a terminal veins of black points from apex to vein 2.

♀. Forewing with the orbicular completely defined by black, the reniform with fuscous centre and whitish annulus defined by black points on outer side; hindwing with dark terminal line from apex to submedian fold and dark line through the cilia to vein 2.

*Habitat.*—SIERRA LEONE; LAGOS; NIGERIA; EGYPT; ARABIA; ABYSSINIA; SOKOTRA; BR. E. AFRICA; MASHONALAND; NATAL; CAPE COLONY; MAURITIUS; RODRIGUEZ; SEYCHELLES; ASIA MINOR; SYRIA; PALESTINE

PERSIA ; PUNJAB, Sultanpur ; SIKHIM ; BOMBAY, Bandra ; MADRAS ; GOOTY ; PHILIPPINES ; BORNEO ; JAVA. *Exp.* 28-32 mill.

*Larva*.—Ochreous with numerous pale points defined by pale brown ; dorsal line orange ; subdorsal line represented by a series of orange marks defined by irregular black lunules above ; lateral line represented by orange marks, the stigmata black with brown patches above them ; head and thoracic plate red-brown.

*Sect. III. (Spodoptera)*.—Antennæ of male ciliated ; fore tibiæ with very large tufts of hair and scales from outer side.

A. Hindwing semihyaline white .. .. *mauritia*.

B. Hindwing cupreous brown .. .. *postfusca*.

1831. SPODOPTERA MAURITIA insert (syn.)

*Spodoptera acronyctoides*. Guen. Noct. i., p. 154 (1852).

1868. SPODOPTERA POSTFUSCA.

#### Genus LAPHYGMA.

##### *Type.*

*Laphygma*, Guen. Noct. i, p. 156 (1852) .. .. *exigua*.

Proboscis fully developed ; palpi upturned, the 2nd joint reaching about to middle of frons and moderately scaled, the 3rd short ; frons smooth ; eyes large, round ; antennæ of male minutely serrate or ciliated ; thorax clothed almost entirely with scales, the prothorax without crest, the metathorax with spreading crest ; tibiæ moderately fringed with hair ; abdomen with dorsal crest at base only. Forewing with the apex rectangular, the termen evenly curved and hardly crenulate ; veins 3 and 5 from near angle of cell ; 6 from upper angle ; 9 from 10 anastomosing with 8 to form the areole ; 11 from cell. Hindwing with veins 3·4 from angle of cell ; 5 obsolescent from just below middle of discocellulars ; 6·7 from upper angle ; 8 anastomosing with the cell near base only.

*Sect. I.*—Antennæ of male minutely serrate.

1829a. LAPHYGMA APERTURA.

*Prodenia apertura*, Wlk., xxxii, 654 (1865).

„ *synstictis*, Hmps., Moths Ind. iv, p. 511 (1896).

*Sect. II.*—Antennæ of male ciliated.

A. Forewing with the orbicular narrow, oblique elliptical .. .. *exempta*.

B. Forewing with the orbiculen round or slightly elliptical .. .. *exigua*.

1855a. LAPHYGMA EXEMPTA.

*Agrotis exempta*, Wlk., 355 (1856) ; Hmps., Cat. Lep. Phal. B. M. viii. p. 261, pl. 128, f. 24.

*Prodenia bipars*, Wlk., xi., 724 (1857).

„ *ingloria*, Wlk. xv., 1679 (1858).

♂. Head and thorax grey tinged with red-brown, the head and basal half of tegulæ browner; palpi with slight dark marks at sides of 2nd joint, tarsi brown ringed with white; abdomen ochreous tinged with brown. Forewing grey tinged with brown and suffused in parts with purplish red especially on costal half from medial to subterminal line; subbasal line represented by indistinct double dark striæ from costa and cell; an oblique black striga with some purplish red beyond it across submedian interspace before the antemedial line, which is double, rather oblique, waved, excurved in submedian interspace; claviform purplish red rather incompletely defined by black; orbicular grey tinged with olive brown and slightly defined by black, oblique elliptical and with pale bar beyond it; reniform slightly and incompletely defined by black and with a diffused blackish mark in centre; the median nervure and veins arising from it slightly streaked with white on medial area; traces of an oblique waved medial line from lower angle of cell to inner margin; postmedial line double, the outer line indistinct, bent outward below costa, then minutely waved, angled inwards in discal fold and incurved below vein 4, some pale points beyond it on costa; a diffused oblique whitish shade from apex to vein 6, the subterminal line arising from it, whitish, minutely waved, incurved below vein 3, with some wedge-shaped black streaks before it at middle, above and below vein 4 extending to postmedial line; a terminal series of slight black lunules; cilia greyish tinged with rufous and with slight rufous line near base. Hindwing ochreous white, the veins tinged with brown, the costal area and termen suffused with brown; a fine dark terminal line; cilia white; the underside with the costal area slightly irrorated with white, a terminal series of blackish points from apex to vein 2.

♀. Forewing more uniform fuscous brown, without the oblique pale bar beyond the orbicular.

*Habitat.*—GOLD COAST; LAGOS; NIGERIA; SUDAN; BR. E. AFRICA; MOZAMBIQUE; RHODESIA; TRANSVAAL; NATAL; ADEN; MADRAS, Palnis; CEYLON, Maskeliya, Haldamulla; SINGAPORE; QUEENSLAND; N. S. WALES; W. AUSTRALIA; HAWAII. *Exp.* 26-38 mill.

1855. LAPHYGMA EXIGUA.

*Noctua exigua*, Hubn. Eur. Schmett. Noct. f. 362 (1808); Dup. Lep. Fr. vi., p. 45, pl. 75, f. 2; Mill. Icones, pl. 75, f. 2; Staud. Cat. Lep. pal. p. 195.

„ *fulgens*, Geyer, Eur. Schmett. Noct., f. 796 (1833).

*Caradrina pygmaea*, Rmbr., Ann. Soc. Ent. Fr. 1834, p. 384, pl. 8, f. 2; Dup. Lep. Fr. Suppl. iii, p. 321, pl. 29, f. 5.

„ *junceti*, Zell. Isis. 1847, p. 455.

*Laphygma cycloides*, Guen. Noct. i., p. 157 (1852).

„ *caradrinoides*, Wlk., ix., 190 (1856).



*Caradrina sebhana*, Aust. Le Nat. 1880 p. 212.

„ *venosa*, Butl. Ent. Mo. Mag., xvii., p. 7 (1880).

Genus ANTHA.

*Type.*

- Anth*, Staud. Rom. Mem., vi, p. 448 (1892) .. .. *grata*.  
*Anodontodes*, Hmps. Trans. Ent. Soc., 1895, p. 302; id.,  
 Moths Ind., iv., p. 523 .. .. *rotunda*.  
 A. Forewing with the orbicular present and with black  
 patch above it on costa .. .. *grata*.  
 B. Forewing with the orbicular absent and without black  
 patch at middle of costa .. .. *rotunda*.

1805. ANTHA GRATA.

*Leptina grata*, Butl. Trans. Ent. Soc. 1881, p. 172; Staud. Cat.  
 Lep. pal., p. 183.

*Anth pretiosa*, Staud. Rom. Mem., vi, p. 448, pl. 7, f. 6 (1892).

2192a. ANTHA ROTUNDA.

Genus AMPHIDRINA.

*Type.*

*Amphidrina*, Staud. Iris., iv, p. 293 (1892) .. .. *agratina*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons and moderately scaled, the 3rd short, porrect; frons smooth; eyes large, round; antennæ of male typically ciliated; thorax clothed chiefly with scales, the pro- and meta-thorax with spreading crests; tibiæ moderately fringed with hair; abdomen with some rough hair at base but without crests. Forewing with the apex rounded, the termen evenly curved, crenulate, veins 3 and 5 from near angle; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from just below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

1864. AMPHIDRINA INTAMINATA.

Genus ATHETIS.

*Type.*

- Athetis*, Hubn. Verz., p. 209 (1827) .. .. *furcula*.  
*Atypha*, Hubn. Verz., p. 213 (1827) .. .. *pulmonaris*.  
*Elaphria*, Hubn. Verz., p. 230 (1827) .. .. *morpheus*.  
*Hapalotis*, Hubn. Verz., p. 254 (1827) .. .. *gutvula*.  
*Nebrissa*, Wlk., Journ. Linn. Soc. Zool., vi., p. 194 (1862) *bimacula*.  
*Anorthodes*, Smith. Trans. Am. Ent. Soc. xviii., p. 114,  
 (1891) .. .. *tarda*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to vertex of head and moderately fringed with scales in front, the 3rd

short; frons smooth; eyes large, round; antennæ of male typically ciliated; thorax clothed with hair and hair-like scales mixed with some scales, the prothorax with small spreading crest, the metathorax without distinct crest; tibiæ moderately fringed with hair; abdomen without crests. Forewing rather narrow, the costa and inner margin subparallel, the apex rounded, the termen evenly curved and slightly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle 8 anastomosing with the cell near base only.

*Sect. I.*—Antennæ of male serrate.

*A.* Forewing with the reniform present.

*a.* Forewing with series of dark points beyond postmedial line .. .. . *externa.*

*b.* Forewing without series of dark points beyond postmedial line .. .. . *cervina.*

*B.* Forewing with the reniform absent .. .. . *castaneipars.*

1876. *ATHETIS EXTERNA.*

1802. *ATHETIS CERVINA.*

1883. *ATHETIS CASTANEIPARS.*

*Sect. II.*—Antennæ of male ciliated.

*A.* Forewing with the reniform with pale annulus.

*a.* Forewing with the reniform filled in with black .. *delecta.*

*b.* Forewing with the reniform not filled in with black.

*a*<sup>1</sup>. Forewing with the reniform constricted at middle and angled inwards on median nervure .. .. . *prætexta.*

*b*<sup>1</sup>. Forewing with the reniform not constricted at middle or angled inwards on median nervure.

*a*<sup>2</sup>. Hindwing uniform brown .. .. . *divisa.*

*b*<sup>2</sup>. Hindwing whitish tinged with brown especially on terminal area .. .. . *ambigua.*

*B.* Forewing with the reniform defined by more or less prominent white points.

*a.* Hindwing wholly suffused with brown.

*a*<sup>1</sup>. Forewing nearly uniform red-brown.

*a*<sup>2</sup>. Forewing dark red-brown; antennæ of male minutely ciliated .. .. . *interstincta.*

*b*<sup>2</sup>. Forewing greyer; antennæ of male with long cilia .. .. . *longiciliata.*

*b*<sup>1</sup>. Forewing pale rufous or greyish variegated with deep rufous and brown .. .. . *fasciata.*

- b.* Hindwing white, the terminal area suffused with brown.
- a*<sup>1</sup>. Forewing with distinct black spot on costa at medial line.
- a*<sup>2</sup>. Forewing grey faintly tinged with ochreous brown .. .. . *bremusa*.
- b*<sup>2</sup>. Forewing much more strongly tinged with ochreous brown .. .. . *himalayica*.
- b*<sup>1</sup>. Forewing without black spot on costa at medial line.
- a*<sup>2</sup>. Forewing with dentate rufous marks before middle of subterminal line .. .. . *fuscicornis*.
- b*<sup>2</sup>. Forewing with slight fuscous shape before subterminal line.
- a*<sup>3</sup>. Forewing with the postmedial line excurved from below costa to vein 4.
- a*<sup>4</sup>. Forewing with slight yellowish spot on outer edge of reniform .. .. . *obtusa*.
- b*<sup>4</sup>. Forewing with slight white spot on outer edge of reniform .. .. . *sincera*.
- b*<sup>3</sup>. Forewing with the postmedial line straight from below costa to vein 4.
- a*<sup>4</sup>. Forewing with the antemedial line angled inwards on vein 1 .. .. . *placida*.
- b*<sup>4</sup>. Forewing with the antemedial line not angled inwards on vein 1 .. .. . *cognata*.
- C.* Forewing with the reniform not defined by white points.
- a.* Forewing with the reniform filled in with black... *bicornis*.
- b.* Forewing with the reniform not filled in with black.
- a*<sup>1</sup>. Forewing with black spot on costa at medial line.
- a*<sup>2</sup>. Forewing ochreous white irrorated with black, the lines with black spots on them .. .. . *vicina*.
- b*<sup>2</sup>. Forewing greyish ochreous largely suffused with fuscous, the lines indistinct, fuscous .. .. . *flavinetta*.
- b*<sup>1</sup>. Forewing without black spot on costa at medial line.
- a*<sup>2</sup>. Forewing with the orbicular a small dark spot .. .. . *stygia*.

*b*<sup>2</sup>. Forewing with the orbicular a black point. . . *bimacula*.

*c*<sup>2</sup>. Forewing with the orbicular absent . . . *variana*.

1860. *ATHETIS DELECTA*.

1887*a*. *ATHETIS PRÆTEXTA*.

*Caradrina prætexta*, Swinh., A. M. N. H. (7) xv., p. 152 (1905);  
Hmps. Cat. Lep. Phal. B. M. viii., p. 316, pl. 129, f. 23.

Head and thorax grey tinged with brown; palpi blackish at sides except at tips; tarsi blackish ringed with white; abdomen grey suffused with dark-brown, the anal tuft of male yellow. Forewing grey-white irrorated and in parts suffused with red-brown; subbasal line double filled in with whitish, waved, from costa to submedian fold; antemedial line double filled in with whitish, angled outwards below costa and excurved below submedian fold; orbicular, a black point defined by whitish; reniform chocolate brown with whitish annulus, constricted at middle and slightly angled inwards on median nervure; a waved dark medial shade; postmedial line double filled in with whitish, slightly bent outwards below costa, then produced to double black points on the veins, oblique below vein 4, some whitish points beyond it on costa; subterminal line whitish defined on inner side by red-brown, slightly angled outward below costa and excurved at middle; terminal area suffused with brown; a terminal series of black lunules slightly defined on inner side by whitish; cilia brown with a waved white line through them. Hindwing greyish suffused with brown; an indistinct discoidal lunule; a terminal series of slight dark lunules from apex to vein 2; cilia yellowish white with a brown line through them; greyish irrorated with brown, a large dark discoidal spot, minutely waved postmedial line, incurved below vein 2, traces of a subterminal band, and a terminal series of small black lunules.

*Habitat*.—ASSAM, Khasis. *Exp.* 32 mill.

1879. *ATHETIS DIVISA*.

1863. *ATHETIS AMBIGUA*.

*Noctua ambigua*, Schiff. Wien. Verz. p. 77 (1776); Fabr. Mant.  
Ins. ii., p. 148 (1787); Staud. Cat. Léop. pal. p. 197.

„ *plantaginis*, Hübn., Eur. Schmett. Noct. f. 576 (1802); Dup.  
Lép. Fr. vi., p. 59, pl. 76, f. 2; Herr. Schöff.,  
Eur. Schmett. Noct. f. 381.

*Orthosia uniformis*, Swinh., Trans. Ent. Soc. 1885, p. 350, pl. 9, f. 6.

*Caradrina hilaris*, Staud. Cat. Léop. pal. p. 197 (1901).

1887*b*. *ATHETIS INTERSTINCTA*.

*Graphiphora interstincta*, Moore, Lep. Atk. p. 118 (1883); Hmps.,  
Cat. Lep. Phal. B. M. viii., p. 324, pl.  
129, f. 27.

Head and thorax red-brown mixed with grey, the head paler; palpi black-brown, greyish at tips; tarsi fuscous with pale rings; abdomen dark

reddish brown. Forewing deep red-brown, slightly tinged with grey and with slight dark irroration; subbasal line black, curved, from costa to submedian fold; antemedial line black, bent inwards to costa and excurved above inner margin; orbicular a black point; reniform chocolate brown, rather constricted at middle, with a white point at upper extremity and two at lower; a. diffused dark medial line, oblique from costa to lower angle of cell and angled inwards below the cell; postmedial line black, slightly bent outwards below costa, then with black points beyond it on the veins, excurved to vein 4, then oblique; submedial line faint, pale, defined on inner side by red-brown, excurved below vein 7 and at middle; a terminal series of minute dark lunules; a fine whitish line at base of cilia. Hindwing reddish brown tinged with grey; a fine whitish line at base of cilia; the underside whitish tinged with brown and irrorated with dark brown, a black discoidal spot, diffused curved postmedial line, and terminal series of small black lunules from apex to vein 2.

*Habitat.*—SIKHEM; BHUTAN. *Exp.* 36-40 mill.

1887c. *ATHETIS LONGICILIATA.*

*Athetis longiciliata*, Hmps., Cat. Lèp. Phal. B. M. viii., p. 324, pl. 129, f. 28 (1909).

Head and thorax rufous mixed with a few dark brown scales; palpi black at sides except at extremities of 2nd and 3rd joints; tarsi fuscous with pale rings; abdomen pale rufous suffused with fuscous except the anal tuft. Forewing rufous tinged with grey and slightly irrorated with brown; subbasal line blackish, angled outwards below costa and ending at submedian fold; antemedial line blackish, oblique to vein 1, then erect; orbicular a blackish point; reniform a narrow lunule defined by diffused rufous, and with slight whitish points round it; medial line brown, rather diffused, oblique from costa to lower angle of cell, then inwardly oblique and sinuous; postmedial line brown, excurved from costa to vein 4, then oblique, with traces of a series of dark points beyond it on the veins; subterminal line yellowish, defined on inner side by brown suffusion, slightly excurved below vein 7 and at middle; a terminal series of black points; cilia with a fine yellowish line at base. Hindwing red-brown tinged with fuscous; a diffused blackish discoidal spot; a terminal series of slight dark lunules; cilia with a fine yellowish line at base; the underside whitish irrorated with dark-brown, a black discoidal spot, rather diffused curved brown postmedial line, and terminal series of small black lunules from apex to vein 2.

Antennæ with the cilia rather long.

*Habitat.*—ASSAM, KHÁSIS. *Exp.* 36 mill.

1887. *ATHETIS FASCIATA.*

*Graphiphora fasciata*, Moore, P. Z. S., 1867, p. 54; Hmps., Cat. Lep. Phal. B. M., viii, p. 325, pl. 129, f. 29.

1857. *ATHETIS BREMUSA.*1856a. *ATHETIS HIMALEYICA.*

*Caradrina himaleyica*, Koll. Hügel's Kaschmir, iv., p. 479 (1844),  
Hmps. Cat. Lep. Phal. B. M. viii., p. 335  
pl. 130, f. 6.

„ *avenacea*, Moore, P. Z. S., 1881, p. 349.

Head, thorax and abdomen grey-white slightly irrorated with brown; palpi black, white at tips; antennæ blackish except at base; tarsi black ringed with white. Forewing grey-white slightly tinged and irrorated with brown; subbasal line represented by a small black spot on costa; antemedial line indistinctly double, minutely waved, oblique, with black spot on the outer line at costa; orbicular a brownish point; reniform a narrow lunule defined by rufous, with some fuscous at lower extremity, two white points on inner edge and three on outer and a rufous point beyond it at middle; medial line with black spot at costa, oblique to the reniform and sinuous from lower angle of cell to inner margin; postmedial line indistinct, with black spot at costa, bent outwards below costa, then minutely waved and with some black points beyond it on the veins, incurved below vein 4, some white points beyond it on costa with slight black streak between them; subterminal line whitish, defined on inner side by small somewhat dentate rufous marks, angled outwards at vein 7 and excurved at middle; the terminal area suffused with fuscous; a terminal series of minute black lunules; cilia with a fine whitish line at base. Hindwing white slightly tinged with reddish brown, especially on the veins and terminal area; cilia white; the underside with the costal and terminal areas irrorated with brown, a small discoidal spot, postmedial series of minute streaks on the veins, and terminal series of small black lunules.

*Habitat.*—W. CHINA; KASHMIR, Goorais Valley, Scinde Valley; PUNJAB, Kulu, Dalhousie, Dharmsala, Umballa; SIKHIM TIBET, Yatong; SIKHIM. *Exp.* 32-36 mill.

1856. *ATHETIS FUSCICORNIS.*

*Caradrina fuscicornis*, Rmbr. Ann. Soc. Ent. Fr. 1832, p. 286, pl. 9, f. 5; Dup. Lèp. Fr. Suppl. iii. pl. 29, f. 4; Staud. Cat. Lep. pal., p. 196.

*Noctua kadenii*, Frr. Neue Beitr. Schmett. ii., p. 147, pl. 186 (1836); Fisch. von. Rosl. Schmett., pl. 36, ff. 2.; a. b.; Dup. Lèp. Fr. Suppl. iii., pl. 29, ff. 2, a. b.; Herr. Schaff. Eur. Schmett. Noct. f. 408; Staud. Cat. Lep. pal. p. 197.

*Caradrina proxima*, Rmbr. Faun. And. pl. 18, f. 7 (1839).

„ *variabilis*, Bell. Ann. Soc. Ent. Fr. 1865, p. 104, pl. 2 f. 1.

*Cratadrina farinacea*, Moore, P. Z. S., 1888, p. 411.

1861. *ATHETIS* OBTUSA.

1862. *ATHETIS* SINCERA.

1859a. *ATHETIS* PLACIDA.

*Radinaera placida*, Moore, Lep. Ceyl. iii. p. 30, pl. 147, f. 4 (1884).

Head, thorax and abdomen pale rufous mixed with greyish; palpi black, white at tips; antennæ black; tarsi black ringed with white. Forewing greyish suffused with rufous and with slight dark irroration; subbasal line slight, dark, curved, from costa to submedian fold; antemedial line very indistinct, oblique, sinuous; orbicular a black point; reniform indistinct diffused, blackish, constricted at middle, with an ochreous point on its outer edge and slight whitish points round it; traces of a dark medial line, oblique from costa to reniform and sinuous below the cell; postmedial line slight, blackish, bent outwards below costa, then minutely dentate, incurved below vein 4; subterminal line defined on inner side by blackish suffusion, minutely dentate, excurved below vein 7 and at middle; a terminal series of black striæ. Hindwing white, the apex slightly tinged with brown; the underside with the costal area tinged with ochreous, a dark discoidal point and postmedial points on the veins from costa to vein 4.

*Habitat*.—CEYLON. *Exp.* 26-30 mill.

1854. *ATHETIS* COGNATA.

1865. *ATHETIS* BICORNIS.

1859b. *ATHETIS* VICINA.

*Cratadrina vicina* Staud. Berl. Ent. Zeit., 1870, p. 118; Hmps

Cat. Lep. Phal. B. M., viii, p. 355, pl. 130, f. 28,

Staud. Cat. Lep. pal., p. 196.

„ *belucha*, Swinh., Trans. Ent. Soc., 1885, p. 348, pl. 9, f. 2.

„ *syriaca* Staud. Iris. iv, p. 294 (1892).

„ *fergana* Staud. Iris. iv, p. 294 (1892).

♂. Head and thorax ochreous white slightly irrorated with red-brown; palpi with black-brown patch at side of 2nd joint; tarsi blackish ringed with white; abdomen white. Forewing yellowish white slightly irrorated with brown, the terminal area suffused with fuscous brown; subbasal line represented by black striæ from costa and median nervure; antemedial line blackish with black spot at costa, oblique, interrupted; orbicular a small round brown spot; reniform a small lunule defined by blackish; medial line with black spot at costa, oblique to reniform, slightly sinuous from cell to inner margin; postmedial line much interrupted, with small black spots at costa. Submedian fold and inner margin strongly bent outwards below costa, slightly incurved at discal fold, incurved below vein 4, some yellow points beyond it on costa; traces of a pale subterminal line, excurved below vein 7 and at middle; a terminal series of small black

lunules; cilia brownish with a fine pale line at base. Hindwing white, the veins of terminal area and termen slightly tinged with brown from apex to vein 2; a fine brown terminal line from apex to submedian fold; cilia tinged with brown at apex; the underside with small apical brownish patch and terminal series of small blackish lunules from apex to vein 2.

♀. Forewing with the terminal area hardly suffused with fuscous except before subterminal line.

*ab. 1. Fergana.* Forewing more distinctly marked but without the dark suffusion on terminal area . . . Armenia, W. Turkestan.

*ab. 2. syriaca.* Darker, the hindwing wholly tinged with fuscous . . . Asia Minor, Syria.

*Habitat.*—SPAIN; S. RUSSIA; ARMENIA; ASIA MINOR; SYRIA; PERSIA; W. TURKESTAN; E. TURKESTAN; BELUCHISTAN, Quetta. *Exp.* ♂ 30, ♀ 32 mill 1859c. *ATHETIS FLAVITINCTA.*

*Athetis flavitincta*, Hmps. Cat. Lep. Phal. B. M., viii., p. 356, pl. 130, f. 29 (1909).

Head and thorax whitish mixed with brownish ochreous; palpi blackish at sides; tarsi black ringed with white; abdomen pale red-brown. Forewing whitish tinged with reddish ochreous and irrorated with brown, the terminal area suffused with pale fuscous; subbasal line represented by a black point on costa; antemedial line indistinct, double, with black point on the outer line at costa, then oblique and slightly waved; orbicular absent; reniform narrow, faintly defined by fuscous; a diffused curved waved medial shade; postmedial line indistinct, double, with black point on the inner line at costa, slightly bent outwards below costa, then minutely dentate, oblique below vein 4, some pale points beyond it on costa; subterminal line indistinct, pale, minutely waved; cilia greyish ochreous mixed with brown and with fine ochreous line at base. Hindwing white tinged with brown, the veins and termen brown; cilia white with a brown line through them from apex to vein 2; the underside white, the costal area irrorated with brown, the termen suffused with brown from apex to vein 2.

*Habitat*—PUNJAB, Kulu, Sultanpur. *Exp.* 32 mill.

1859d. *ATHETIS STYGIA.*

*Athetis stygia*, Hmps. Cat. Lep., Phal. B. M., viii, p. 357, pl. 130, f. 30 (1909).

Head, thorax and abdomen brown mixed with grey; palpi blackish, whitish at tips; tarsi fuscous ringed with whitish. Forewing grey tinged with brown and thickly irrorated with dark-brown; subbasal line brown, curved from costa to submedian fold; antemedial line brown, angled outwards below costa, then obliquely excurved; orbicular a small round brown spot with faint pale annulus; reniform elongate elliptical, brown with a



faint pale annulus ; a rather diffused dark medial line, oblique from costa to median nervure, then inwardly oblique ; postmedial line indistinct dark, bent outwards below costa, then dentate and produced to dark points on the veins, incurved below vein 4, some pale points beyond it on costa ; subterminal line whitish defined on inner side by red-brown, almost straight ; a terminal series of slight black points. Hindwing grey suffused with brown ; a terminal series of slight dark striæ ; cilia with a fine whitish line at base ; the underside whitish thickly irrorated with brown, a black discoidal lunule and rather diffused curved postmedial line.

*Habitat*.—PUNJAB, Kulu, Sultanpur, Simla, Dharmsala, Kalapani. *Exp.* 26-36. mill.

1857a. *ATHETIS BIMACULA*.

*Nebrissa bimacula*, Wlk., Journ. Linn. Soc. Zool. vi, p. 194 (1862);  
Swinh., Cat. Het. Mus. Oxon. ii, p. 41, pl. 1,  
f. 22.

*Cavadrina terminata*, Hmps., J. Bom. Soc. Nat. Hist. xi, p.  
444 (1897).

1881. *ATHETIS VARIANA*.

Genus *HYPOPERIGEA*.

*Type*.

*Hypoperigea*, Hmps., Cat. Lep. Phal. B. M., viii., p. 422  
(1909) .. .. . *tonza*.

Proboscis fully developed; palpi obliquely upturned, the 2nd joint reaching about to middle of frons and rather broadly scaled, the 3rd moderate; frons with rather small truncate cornical prominence with slightly raised edges and corneous plate below it; eyes large, round; antennæ of male minutely serrate and ciliated, with a ridge of scaled between them; thorax clothed chiefly with scales, the pro-and metathorax with spreading crests; tibiæ moderately fringed with hair; abdomen with dorsal crest at base only. Forewing with the apex rounded, the termen evenly curved, crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 an a stomosing with the cell near base only.

A. Forewing with large white or pale patch at base.

a. Forewing with white or pale curved mark from  
middle of costa to apex .. .. . *albonotata*.

b. Forewing with obliquely placed white patches from  
middle of costa to apex .. .. . *leprostricta*.

B. Forewing without white or pale basal patch.

2024. *HYPOPERIGEA ALBONOTATA*.

*Tatache albonotata*, Hmps., Ill. Het. B. M. ix., p. 96, pl. 162, f. 22 (1893).

„ *plumbicula*, Hmps., J. Bomb. Nat. Soc. xvii., p. 475 (1906).

1717e. HYPOPRIGEA LEPROSTICTA.

1874b. HYPOPERIGEA TURPIS.

*Acontia turpis*, Wlk. xii, 794 (1857).

*Caradrina discophora*, Hmps., J. Bomb., Nat. Hist. Soc. xiv., p. 204 (1902).

#### Genus DYSMILICHIA.

*Type.*

*Phalacra*, Staud. Rom. Mém., vi., p. 568 (1892), Nec. Wlk.

Lep. 1866 .. .. . *gemella*.

*Milichia*, Snell. Tijd. v. Ent., xli, p. 194 (1898), Nec.

Mieg. Dipt. 1830 .. .. . *gemella*.

*Dysmilichia*, Speiser, Berl. Ent. Zeit., xlvii., p. 140 (1902). *gemella*.

Proboscis fully developed; palpi oblique, short, fringed with hair in front; frons with truncate conical prominence with raised edges and corneous plate below it; eyes large, round; antennæ of male typically ciliated; build slender; thorax clothed chiefly with scales and without crests; tibiæ moderately fringed with hair; abdomen without crests. Forewing short and broad, the apex rounded, the termen evenly curved and not crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell; 5 obsolescent from just below middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

1834a. DYSMILICHIA CALAMISTRATA.

*Ilattia calamistrata*, Moore, P. Z. S., 1881., p. 348; Hmps., Cat.

Lep. Phal. B. M., viii., p. 428, pl. 133, f. 12.

♀. Head and thorax rufous mixed with whitish; tarsi ringed with whitish; abdomen whitish suffused with rufous. Forewing deep rufous, a white point at base; subbasal line represented by a white point below costa; antemedial line represented by a white striga angled outwards below costa and white points on median nervure and vein 1; claviform absent; orbicular round, white defined by black; reniform figure-of-eight-shaped, with white annulus defined by black, interrupted at middle; post-medial line fine, rufous traversing a series of small elongate white spots defined by rufous, bent outwards below costa, then minutely waved, ex-curved to vein 4, then incurved, some white points beyond it on costa; subterminal line represented by white striæ from costa and inner margin, hardly traceable between those points, ex-curved below vein 7 and at middle; a terminal series of dark striæ; cilia with a slight dark line

through them. Hindwing whitish suffused with red-brown; the cilia white with a brown line near base and brown spots at tips; the underside whitish thickly irrorated with red-brown, a slight discoidal spot and curved diffused brown postmedial line.

*Habitat.*—SIKHIM; ASSAM, Khásis. *Exp.* 26-30 mill.

Genus PROXENUS.

*Type.*

*Proxenus*, Her. Schaff. Eur. Schmett. ii., p. 240 (1845) .. *hospes*.

*Radinogoes*, Butl. Trans. Ent. Soc., 1886, p. 393 .. .. *tenuis*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching about to middle of frons, and moderately scaled, the 3rd short; frons smooth; eyes large, round; antennæ of male typically ciliated; thorax clothed chiefly with scales and without crests, build slender; tibiæ moderately fringed with hair; abdomen without crests. Forewing long and narrow, the apex rounded, the termen evenly curved and hardly crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hindwing with veins 3·4 from angle of cell or shortly stalked; 5 obsolescent from middle of discocellulars; 6·7 from upper angle or shortly stalked; 8 anastomosing with the cell near base only.

*Sect. I. (Proxenus).*—Mid and hind tibiæ of male with fringes of pale hair on outer side, abdomen with lateral fringes of pale hair on basal segments.

1889a. PROXENUS DISSIMILIS.

*Proxenus dissimilis*, Hmspn., Cat. Lep. Phal. B. M., viii., p. 431  
pl. 133, f. 15 (1909)

Head and thorax brown mixed with grey; palpi black at sides, whitish in front and at tips; mid and hind tibiæ of male fringed with whitish hair; abdomen grey suffused with brown, the basal segments in male with lateral fringes of white hair, the genital tufts whitish. Forewing glossy brown irrorated with grey and dark brown; traces of a double waved antemedial line; orbicular a dark point; reniform a small lunule slightly defined by brown; postmedial line indistinct, double, bent outwards below costa, then waved, incurved at discal fold and below vein 4, the veins beyond it with dark streak to the subterminal line, which is greyish defined on inner side by fuscous, angled outwards at vein 7 and excurved at middle; a terminal series of black points with whitish points between them. Hindwing white, the apical area and termen to vein 2 tinged with brown; cilia brown towards apex with a fine white line at base; the underside with the costal area irrorated with brown except at base, a slight discoidal point.

*Habitat.*—JAPAN; SIKHIM, 1,800'; S. BORNEO; PHILIPPINES. *Exp.* 24-30 mill.

Sect. II. (*Radinogoes*).—Mid and hind tibiæ and abdomen of male normal.  
1889b. PROXENUS TRISTIS.

*Caradrina tristis*, Brem. Lep. Ost. Sib., p. 49, pl. 5, f. 9 (1864);  
Hmspn., Cat. Lep. Phal., B. M., viii., p. 437,  
pl. 133, f. 23; Stand., Cat. Lep. pal., p. 198.

*Hydrilla lugens*, Staud. Rom. Mem. vi., p. 490 (1892).

Head and thorax whitish suffused with pale brown; palpi whitish, fuscous at tips; tarsi with slight whitish rings; abdomen whitish tinged with brown. Forewing ochreous white suffused and irrorated with brown, the costal area whiter; subbasal line absent; faint traces of a waved antemedial line; orbicular represented by a small elongate black spot in cell, the reniform by minute black lunules on inner and outer sides; postmedial line very indistinct, bent outwards below costa, then dentate, incurved below vein 4; subterminal line absent; a terminal series of faint dark points. Hind-wing white, the veins tinged with brown; a fine brown terminal line; the underside with the costal area irrorated with brown.

*Ab. 1. lugens*. Dark.

*Habitat*.—E. SIBERIA; KASHMIR, Goorais Valley, Nubra. *Exp.* ♂ 30,  
♀ 28 mill.

#### Genus STYGIATHETIS.

*Type.*

*Stygiathetis*, Hmspn. Cat. Lep. Phal. B. M., viii., p. 444

(1909) .. .. . *mus*.

Proboscis fully developed; palpi upturned, the 2nd joint reaching to vertex of head and moderately fringed with hair in front, the 3rd long, oblique; frons with short truncate conical prominence with raised edges; eyes large, round; antennæ of male fasciculate; thorax clothed with long hair and hair-like scales and without crests; tibiæ fringed with rather long hair; abdomen clothed with rough hair and with lateral fringes of hair but without crests, the claspers large. Forewing narrow, the costa and inner margin subparallel, the apex rounded, the termen evenly curved, crenulate; veins 3 and 5 from near angle of cell; 6 from upper angle; 9 from 10 anastomosing with 8 to form the areole; 11 from cell. Hind-wing with veins 3·4 from angle of cell; 5 obsolescent from middle of discocellulars; 6·7 from upper angle; 8 anastomosing with the cell near base only.

1888. STYGIATHETIS MUS.

(To be continued.)